Translation

PCT/JP2004/000522

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY
(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference 103-1029	FOR FURTHER ACTION	See Form PCT/IPEA/416
International application No. PCT/JP2004/000522	International filing date (*day/month/year*) 22 January 2004 (22.01.2004)	Priority date (*day/month/year*) 22 January 2003 (22.01.2003)
International Patent Classification (IPC) or national classification and IPC C08G 63/183, 63/78		
Applicant ASAHI KASEI CHEMICALS CORPORATION		

1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 3 sheets, including this cover sheet.

3. This report is also accompanied by ANNEXES, comprising:

a. ☒ *(sent to the applicant and to the International Bureau)* a total of 2 sheets, as follows:

☒ sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).

☐ sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.

b. ☐ *(sent to the International Bureau only)* a total of (indicate type and number of electronic carrier(s)) _____, containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).

4. This report contains indications relating to the following items:

- ☒ Box No. I Basis of the report
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

Date of submission of the demand	Date of completion of this report
20 February 2004 (20.02.2004)	03 December 2004 (03.12.2004)
Name and mailing address of the IPEA/JP Facsimile No.	Authorized officer Telephone No.

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.
PCT/JP2004/000522

Box No. I Basis of the report

1. With regard to the **language**, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ This report is based on translations from the original language into the following language _____, which is language of a translation furnished for the purpose of:

☐ international search (under Rules 12.3 and 23.1(b))

☐ publication of the international application (under Rule 12.4)

☐ international preliminary examination (under Rules 55.2 and/or 55.3)

2. With regard to the **elements** of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:

☐ The international application as originally filed/furnished

☒ the description:

pages 1-130, 132-137,139, as originally filed/furnished

pages* 131, 138 received by this Authority on 29 March 2004 (29.03.2004)

pages* _____ received by this Authority on _____

☒ the claims:

pages 1-8, as originally filed/furnished

pages* _____, as amended (together with any statement) under Article 19

pages* _____ received by this Authority on _____

pages* _____ received by this Authority on _____

☒ the drawings:

pages 1/3-3/3, as originally filed/furnished

pages* _____ received by this Authority on _____

pages* _____ received by this Authority on _____

☐ a sequence listing and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.

3. ☐ The amendments have resulted in the cancellation of:

☐ the description, pages _____

☐ the claims, Nos. _____

☐ the drawings, sheets/figs _____

☐ the sequence listing *(specify)*: _____

☐ any table(s) related to sequence listing *(specify)*: _____

4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

☐ the description, pages _____

☐ the claims, Nos. _____

☐ the drawings, sheets/figs _____

☐ the sequence listing *(specify)*: _____

☐ any table(s) related to sequence listing *(specify)*: _____

* *If item 4 applies, some or all of those sheets may be marked "superseded."*

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.
PCT/JP2004/000522

Box No. V **Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

1. Statement

Novelty (N)	Claims	1-8	YES
	Claims		NO
Inventive step (IS)	Claims	1-8	YES
	Claims		NO
Industrial applicability (IA)	Claims	1-8	YES
	Claims		NO

2. Citations and explanations (Rule 70.7)

Document 1: JP, 2003-12780, A (Asahi Kasei Corp.), 15 January, 2003.
Document 2: JP, 10-218980, A (Asahi Chemical Industry Co., Ltd.), 18 August, 1998

Claims 1 and 2

The inventions described in claims 1 and 2 appear to involve an inventive step with respect to documents 1 and 2 cited in the ISR.

Documents 1 and 2 do not describe a polytrimethylene terephthalate resin that has a content of a specific cyclic dimer of 2 wt.% or less, a lightness index L value of 70-100, and a chromaticity index b* value of -5 to 20. Meanwhile, the invention of the present application demonstrates a useful effect of providing a resin that has a strength and color tone superior to those of the aforementioned resin and in which the cyclic dimer is prevented from oozing to the molding surface.

Claims 3-8

The inventions of claims 3 to 8 appear to involve an inventive step with respect to documents 1 and 2 cited in the ISR.

Documents 1 and 2 do not describe a process of evaporating and removing a cyclic dimer under a reduced pressure from a molten crude trimethylene terephthalate resin with a cyclic dimer formation index E = W/M of less than 0.066 (in this formula, M is the amount of end hydroxyl groups in the crude trimethylene terephthalate resin, represented by mol%, related to the total molar amount of trimethylene terephthalate units, and W is a regenerative formation rate of the cyclic dimer, represented by the wt.% of the cyclic dimer per 1 min, this cyclic dimer being regenerated when a crude trimethylene terephthalate resin in a molten state with a content of the cyclic dimer reduced to 0.1 wt.% or less is held in a molten state at a temperature of 260°C). Meanwhile, the invention of the present application demonstrates a useful effect of providing a method for the manufacture of a polytrimethylene terephthalate resin that has a strength and color tone superior to those of the aforementioned resin and in which the cyclic dimer is prevented from oozing to the molding surface.